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RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/892,613C

DATE: 08/07/2002

TIME: 09:37:23

Input Set : A:\09892613.ST25.txt

Output Set: N:\CRF3\08072002\I892613C.raw

3 <110> APPLICANT: Leung, Shawn Shui-on  
5 <120> TITLE OF INVENTION: REDUCING IMMUNOGENICITIES OF IMMUNOGLOBULINS BY FRAMEWORK-PATCHING

7 <130> FILE REFERENCE: 655  
9 <140> CURRENT APPLICATION NUMBER: US 09/892,613C  
10 <141> CURRENT FILING DATE: 2001-06-27  
12 <160> NUMBER OF SEQ ID NOS: 32  
14 <170> SOFTWARE: PatentIn version 3.1  
16 <210> SEQ ID NO: 1  
17 <211> LENGTH: 369  
18 <212> TYPE: DNA  
19 <213> ORGANISM: Artificial Sequence  
21 <220> FEATURE:  
22 <223> OTHER INFORMATION: FR-patched heavy chain variable region sequence (Full DNA

Sequenc

23 e) formed by joining the N- and C- terminal (SEQ 3 and 6) halves  
24 at the KpeI site.  
26 <220> FEATURE:  
27 <221> NAME/KEY: V\_region  
28 <222> LOCATION: (1)..(369)  
29 <223> OTHER INFORMATION:  
32 <400> SEQUENCE: 1  
33 gaagtgcagc tgctggagtc tgggggaggc ttagtgcagc ctggagggtc cctgaggctc 60  
35 tctgtgagc cctctggatt ctccttcagt atctatgaca tgtcttgggt tcgccaggca 120  
37 ccgggaaagg ggctggagtg ggtcgcatatc attagtagtg gtggtggtac cacctactat 180  
39 ccagacactg tgaagggccg attcaccatc tccagagaca atgccaagaa ctccctgtac 240  
41 ctgcaaataga acagtctgag ggtggaggac acagccttat attactgtgc aagacatagt 300  
43 ggctacggta gtagctacgg ggttttgttt gcttactggg gccaaaggac tctggtcact 360  
45 gtctcttca 369

48 <210> SEQ ID NO: 2  
49 <211> LENGTH: 123  
50 <212> TYPE: PRT  
51 <213> ORGANISM: Chimaera sp.  
53 <400> SEQUENCE: 2

55 Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly  
56 1 5 10 15  
59 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ser Phe Ser Ile Tyr  
60 20 25 30  
63 Asp Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
64 35 40 45  
67 Ala Tyr Ile Ser Ser Gly Gly Gly Thr Thr Tyr Tyr Pro Asp Thr Val  
68 50 55 60  
71 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr  
72 65 70 75 80

75 Leu Gln Met Asn Ser Leu Arg Val Glu Asp Thr Ala Leu Tyr Tyr Cys

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76          85          90          95
79 Ala Arg His Ser Gly Tyr Gly Ser Ser Tyr Gly Val Leu Phe Ala Tyr
80          100          105          110
83 Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
84          115          120
87 <210> SEQ ID NO: 3
88 <211> LENGTH: 111
89 <212> TYPE: DNA
90 <213> ORGANISM: Artificial Sequence
92 <220> FEATURE:
93 <223> OTHER INFORMATION: N-template is a synthetic sense-strand oligonucleotide
encoding a
94     mino acide 14-50 of the VH region (SEQ ID No. 2). The template is
95     PCR-amplified by two primers (SEQ ID No. 4 and 5)
97 <220> FEATURE:
98 <221> NAME/KEY: V_region
99 <222> LOCATION: (1)..(111)
100 <223> OTHER INFORMATION:
103 <400> SEQUENCE: 3
104 cctggagggt ccctgaggct ctctgtgca gcctctggat tctccttcag tatctatgac      60
106 atgtcttggg ttgccaggc accgggaaag gggctggagt ggtcgcata c      111
109 <210> SEQ ID NO: 4
110 <211> LENGTH: 57
111 <212> TYPE: DNA
112 <213> ORGANISM: Artificial Sequence
114 <220> FEATURE:
115 <223> OTHER INFORMATION: 5' Primer is a synthetic sense-strand oligonucleotide
encoding am
116     ino acid 1-19 of the VH region (SEQ ID No. 2). The 3' end of the
117     primer overlaps with the 5'end of the template by 18 nucleotides
118
120 <220> FEATURE:
121 <221> NAME/KEY: primer_bind
122 <222> LOCATION: (1)..(57)
123 <223> OTHER INFORMATION:
126 <400> SEQUENCE: 4
127 gaagtgcagc tgctggagtc tgggggaggc ttagtgcagc ctggagggtc cctgagg      57
130 <210> SEQ ID NO: 5
131 <211> LENGTH: 48
132 <212> TYPE: DNA
133 <213> ORGANISM: Artificial Sequence
135 <220> FEATURE:
136 <223> OTHER INFORMATION: 3' Primer is a synthetic anti-sense-strand oligonucleotide
encodi
137     ng amino acid 43-59 of the VH region(SEQ ID No. 2). The primer o
138     verlaps with the template by 21 nucleotides.
140 <220> FEATURE:
141 <221> NAME/KEY: primer_bind
142 <222> LOCATION: (1)..(48)
143 <223> OTHER INFORMATION:
146 <400> SEQUENCE: 5
147 gtaggtggta ccaccaccac tactaatgta tgcgaccac tccagccc      48

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Input Set : A:\09892613.ST25.txt

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150 <210> SEQ ID NO: 6
151 <211> LENGTH: 132
152 <212> TYPE: DNA
153 <213> ORGANISM: Artificial Sequence
155 <220> FEATURE:
156 <223> OTHER INFORMATION: C-terminal is a synthetic sense-strand oligonucleotide
encoding a
157     mino acid 68-111 of the VH region (SEQ ID No 2) The template is P
158     CR-amplified by two primers (SEQ ID No 7 and 8)
160 <220> FEATURE:
161 <221> NAME/KEY: V_region
162 <222> LOCATION: (1)..(132)
163 <223> OTHER INFORMATION:
166 <400> SEQUENCE: 6
167 ttcaccatct ccagagacaa tgccaagaac tccctgtacc tgcaaatgaa cagtctgagg      60
169 gtggaggaca cagccttata ttactgtgca agacatagtg gctacggtag tagctacggg      120
171 gttttgtttg ct                                     132
174 <210> SEQ ID NO: 7
175 <211> LENGTH: 60
176 <212> TYPE: DNA
177 <213> ORGANISM: Artificial Sequence
179 <220> FEATURE:
180 <223> OTHER INFORMATION: 5' Primer is a synthetic sense-strand oligonucleotide
encoding am
181     ino acid 55-74 of the VH region (SEQ ID No 2). The 3' end of the
182     primer overlaps with the 5'end of the template by 21 nucleotides
183     .
185 <220> FEATURE:
186 <221> NAME/KEY: primer_bind
187 <222> LOCATION: (1)..(60)
188 <223> OTHER INFORMATION:
191 <400> SEQUENCE: 7
192 ggtggtacca cctactatcc agacactgtg aagggccgat tcaccatctc cagagacaat      60
195 <210> SEQ ID NO: 8
196 <211> LENGTH: 57
197 <212> TYPE: DNA
198 <213> ORGANISM: Artificial Sequence
200 <220> FEATURE:
201 <223> OTHER INFORMATION: 3' Primer is a synthetic anti-sense-strand oligonucleotide
encodi
202     ng amino acid 105-123 of the VH region (SEQ ID No 2). The primer
203     and the template overlaps by 21 nucleotides.
205 <220> FEATURE:
206 <221> NAME/KEY: primer_bind
207 <222> LOCATION: (1)..(57)
208 <223> OTHER INFORMATION:
211 <400> SEQUENCE: 8
212 tgaagagaca gtgaccagag tcccttggcc ccagtaagca aacaaaaccc cgtagct      57
215 <210> SEQ ID NO: 9
216 <211> LENGTH: 321
217 <212> TYPE: DNA
218 <213> ORGANISM: Artificial Sequence

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220 <220> FEATURE:

221 <223> OTHER INFORMATION: FR-patched light chain variable region sequence formed by joining the N- and C- terminal (SEQ 11 and 14) halves at the KpeI site.

222

224 <220> FEATURE:

225 <221> NAME/KEY: V\_region

226 <222> LOCATION: (1)..(321)

227 <223> OTHER INFORMATION:

230 <400> SEQUENCE: 9

231 gatatccaga tgaccagtc tccatcctcc ctgtctgcct ctgtgggaga cagagtcacc 60

233 attagttgca gggcaagtca ggacattagc aattatttaa actggtatca gcagaaacca 120

235 ggtaaggctc cgaaactcct gatctactac actagtatat tacactcagg agtcccatca 180

237 aggttcagtg gcagtggtgc tggaacagaa ttactctca ccattagctc cctgcagcca 240

239 gaagattttg ccacttactt ttgccaacag ggtaatacgc ttccgtggac gttcgggtga 300

241 ggcaccaagg tggaaatcaa a 321

244 <210> SEQ ID NO: 10

245 <211> LENGTH: 107

246 <212> TYPE: PRT

247 <213> ORGANISM: Chimaera sp.

249 <400> SEQUENCE: 10

251 Asp Ile Gln Met Thr Gln Ser Pro Ser Leu Ser Ala Ser Val Gly

252 1 5 10 15

255 Asp Arg Val Thr Ile Ser Cys Arg Ala Ser Gln Asp Ile Ser Asn Tyr

256 20 25 30

259 Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile

260 35 40 45

263 Tyr Tyr Thr Ser Ile Leu His Ser Gly Val Pro Ser Arg Phe Ser Gly

264 50 55 60

267 Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro

268 65 70 75 80

271 Glu Asp Phe Ala Thr Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Trp

272 85 90 95

275 Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys

276 100 105

279 <210> SEQ ID NO: 11

280 <211> LENGTH: 108

281 <212> TYPE: DNA

282 <213> ORGANISM: Artificial Sequence

284 <220> FEATURE:

285 <223> OTHER INFORMATION: N-template is a synthetic sense-strand oligonucleotide encoding a

286 mino acid 11-46 of the VL region (SEQ ID No. 10). The template is

287 PCR-amplified by two primers (SEQ ID No. 12 and 13)

289 <220> FEATURE:

290 <221> NAME/KEY: V\_region

291 <222> LOCATION: (1)..(108)

292 <223> OTHER INFORMATION:

295 <400> SEQUENCE: 11

296 ctgtctgcct ctgtgggaga cagagtcacc attagttgca gggcaagtca ggacattagc 60

298 aattatttaa actggtatca gcagaaacca ggtaaggctc cgaaactc 108

301 <210> SEQ ID NO: 12

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Input Set : A:\09892613.ST25.txt

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302 <211> LENGTH: 51
303 <212> TYPE: DNA
304 <213> ORGANISM: Artificial Sequence
306 <220> FEATURE:
307 <223> OTHER INFORMATION: 5' Primer is a synthetic sense-strand oligonucleotide
encoding am
308      ino acid 1-17 of the VH region (SEQ ID No 10). The 3' end of the
309      primer overlaps with the 5'end of the template by 21 nucleotides
310      .
312 <220> FEATURE:
313 <221> NAME/KEY: primer_bind
314 <222> LOCATION: (1)..(51)
315 <223> OTHER INFORMATION:
318 <400> SEQUENCE: 12
319 gatatccaga tgacccagtc tccatcctcc ctgtctgcct ctgtgggaga c          51
322 <210> SEQ ID NO: 13
323 <211> LENGTH: 40
324 <212> TYPE: DNA
325 <213> ORGANISM: Artificial Sequence
327 <220> FEATURE:
328 <223> OTHER INFORMATION: 3' Primer is a synthetic anti-sense-strand oligonucleotide
encodi
329      ng amino acid 40-53. The primer and the template overlaps by 18
330      nucleotides.
332 <220> FEATURE:
333 <221> NAME/KEY: primer_bind
334 <222> LOCATION: (1)..(40)
335 <223> OTHER INFORMATION:
338 <400> SEQUENCE: 13
339 atatactagt gtagtagatc aggagtttcg gaggccttacc          40
342 <210> SEQ ID NO: 14
343 <211> LENGTH: 120
344 <212> TYPE: DNA
345 <213> ORGANISM: Artificial Sequence
347 <220> FEATURE:
348 <223> OTHER INFORMATION: C-terminal is a synthetic sense-strand oligonucleotide
encoding a
349      mino acid 59-98 of the VH region (SEQ ID No 10) The template is P
350      CR-amplified by tow primers (SEQ ID No 15 and 16)
352 <220> FEATURE:
353 <221> NAME/KEY: V_region
354 <222> LOCATION: (1)..(120)
355 <223> OTHER INFORMATION:
358 <400> SEQUENCE: 14
359 ccatcaaggt tcagtggcag tgggtctgga acagaattta ctctcaccat tagctccctg          60
361 cagccagaag attttgccac ttacttttgc caacagggta atacgcttcc gtggacgttc          120
364 <210> SEQ ID NO: 15
365 <211> LENGTH: 49
366 <212> TYPE: DNA
367 <213> ORGANISM: Artificial Sequence
369 <220> FEATURE:
370 <223> OTHER INFORMATION: 5' Primer is a synthetic sense-strand oligonucleotide
encoding am

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**VERIFICATION SUMMARY**

PATENT APPLICATION: US/09/892,613C

DATE: 08/07/2002

TIME: 09:37:24

Input Set : A:\09892613.ST25.txt

Output Set: N:\CRF3\08072002\I892613C.raw